

APPENDIX 1

Functions for Code Block

```

/* The following C functions describe, using the conditional expression */
/* syntax, the individual functions for pc, ax, bx, cx, dx, and cf */
#define AX ((unsigned long)ax)
#define BX ((unsigned long)bx)
#define DX ((unsigned long)dx)

typedef (*PFI)();
PFI pcres()
{
    extern exit();

    return exit;
}

int axres(ax)
int ax;
{
    return ax;
}

int bxres(ax, bx, dx)
int ax, bx, dx;
{
    return (
        ax <= 0 ? bx : (
            (AX + BX) < 65536L ? ax + bx : (
                (DX + 1) < 65536L ? ax + bx : (
                    (((dx & 0x01) << 15) | ((ax + bx) >> 1))
                    + ((ax - bx) & 0x01)
                )
            )
        )
    );
}

int cxres(ax, bx, cx, dx)
int ax, bx, cx, dx;
{
    return (
        ax <= 0 ? cx : (
            (AX + BX) < 65536L ? cx : (
                (DX + 1) < 65536L ? cx : cx + 1
            )
        )
    );
}

int dxres(ax, bx, dx)
int ax, bx, dx;
{
    return (
        ax <= 0 ? dx : (
            (AX + BX) < 65536L ? dx : (
                (DX + 1) < 65536L ? dx + 1 : (
                    ((dx + 1) >> 1) + (dx & 0x01)
                )
            )
        )
    );
}

int cfres(ax, bx, dx)
int ax, bx, dx;
{
    return 0;
}

```